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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/700,327	11/03/2003	Paul S. Andry	YOR920030196US1	5140
7590	07/13/2007	David Aker 23 Southern Road Hartsdale, NY 10530	EXAMINER	
WILCZEWSKI, MARY A		ART UNIT		PAPER NUMBER
2822		MAIL DATE		DELIVERY MODE
07/13/2007		PAPER		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/700,327	ANDRY ET AL.	
	<b>Examiner</b>	<b>Art Unit</b>	
	M. Wilczewski	2822	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### **Status**

1) Responsive to communication(s) filed on 19 July 2006.  
 2a) This action is **FINAL**.                    2b) This action is non-final.  
 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### **Disposition of Claims**

4) Claim(s) 1-36 is/are pending in the application.  
 4a) Of the above claim(s) 1-11, 18-20 and 24-27 is/are withdrawn from consideration.  
 5) Claim(s) \_\_\_\_\_ is/are allowed.  
 6) Claim(s) 12-17, 21-23 and 28-36 is/are rejected.  
 7) Claim(s) \_\_\_\_\_ is/are objected to.  
 8) Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### **Application Papers**

9) The specification is objected to by the Examiner.  
 10) The drawing(s) filed on 3 November 2003 is/are: a) accepted or b) objected to by the Examiner.  
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).  
 11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### **Priority under 35 U.S.C. § 119**

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
 a) All    b) Some \* c) None of:  
 1. Certified copies of the priority documents have been received.  
 2. Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### **Attachment(s)**

1) Notice of References Cited (PTO-892)  
 2) Notice of Draftsperson's Patent Drawing Review (PTO-948)  
 3) Information Disclosure Statement(s) (PTO/SB/08)  
 Paper No(s)/Mail Date 21 June 2004.

4) Interview Summary (PTO-413)  
 Paper No(s)/Mail Date. \_\_\_\_\_.  
 5) Notice of Informal Patent Application  
 6) Other: \_\_\_\_\_.

## **DETAILED ACTION**

**This Office action is in response to the Response to Second Restriction Requirement filed on 19 July 2006. Claims 1-36 are pending in this application. Claims 1-11, 18-20, and 24-27 are withdrawn from consideration.**

### ***Election/Restrictions***

Applicant's election without traverse of the invention of Species IV in the reply filed on July 19, 2006, is acknowledged. Claims 12-17, 21-23, and 28-36 are deemed to read on the elected species.

Since no arguments have been presented traversing the restriction requirement, Applicant's election is deemed *without traverse*.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 12-17, 21, 23, and 28-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sakaida et al., US Patent 6,695,020.

Sakaida et al. disclose a filling apparatus (figure 7) for filling vias in a substrate that comprises a chamber 5 in which to place the substrate 20 said chamber being capable of being evacuated; a surface 3 upon which to place the substrate 20; a paste

delivery portion 4 for providing a paste 13 to fill the vias; and a paste filling portion 6 for bringing the paste into contact with the vias under pressure so that the paste fills the vias (column 10, lines 40-67, and column 11, lines 6-31). Sakaida et al. further teach that a protecting film is applied to the surface of the substrate (column 10, lines 1-11).

Although Sakaida et al. disclose that other materials can be used as a substrate to which the known invention can be applied (column 18, lines 58-67), Sakaida et al. does not expressly disclose a wafer. However, it is well known that the material worked upon does not limit apparatus claims, and are of no significance in determining the patentability of an apparatus claim. The purpose to which an apparatus is to be put or expressions relating the apparatus to contents thereof during an intended operation are of not significant in determining patentability of the apparatus claim. *Ex parte Thibault*, 164 USPQ 666, 667 (Bd. App. 1969). Furthermore, the inclusion of the material worked upon by a structure being claimed does not impart patentability to the claims. *In re Young*, 25 USPQ 69 (CCPA 1935) (as restated in *In re Otto*, 136 USPQ 458, 459 (CCPA 1963)).

Claim 22 is rejected under 35 U.S.C. 103(a) as being unpatentable over Sakaida et al., US Patent 6,695,020, as applied to claim 21 above, and further in view of Kanno et al., US Patent 6,243,251.

Sakaida et al. is applied as above. Sakaida et al. lack anticipation of using an electrostatic chuck. However, the advantages of electrostatic chucks is well known in the art, see Kanno et al., column 1, lines 42-57. Since an electrostatic chuck permits

the surface of a substrate to be processed without being mechanically contacted by the chuck, any contamination of the substrate can be prevented, therefore it would have been obvious to one skilled in the art to substitute an electrostatic chuck for the base 2 used in the known apparatus of Sakaida et al.

Claims 31-36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Sakaida et al., US Patent 6,695,020, as applied to claims 28 and 30 above, and further in view of Vinciarelli, US Patent 5,720,324.

Sakaida et al. is applied as above. Sakaida et al. lack anticipation of using a rotating base. Vinciarelli discloses an apparatus for filling a free space (via) within an assembly with flowable material in which the base is rotated, see figure 4. By rotating the base in the known apparatus of Vinciarelli, a centrifugal force is imposed on the flowable material causing it to be forced outward into the free space (via), see figures 6B-6E; column 2, lines 42-53; and column 6, lines 10-23. It would have been obvious to one skilled in the art to provide a rotating base in the known apparatus of Sakaida et al. in order to produce an outward force that will impose a centrifugal force on the paste, which is a flowable material, thereby ensuring the complete filling of the vias in the substrate.

***Conclusion***

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The additionally cited references disclose various types of apparatuses used for the filling of vias in a substrate, for example, CMP apparatuses, and/or various parts of apparatuses used to process substrates, for example, electrostatic chucks.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to M. Wilczewski whose telephone number is (571) 272-1849. The examiner can normally be reached on Monday and Thursday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Zandra Smith can be reached on 571-272-2429. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



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